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UNITED STATES GOVERNMENT

MEMORANDUM U.S. FISH AND WILDLIFE SERVICE

NEW ENGLAND FIELD OFFICE
70 COMMERCIAL STREET, SUITE 300
CONCORD, NEW HAMPSHIRE 03301-5087

TO: Bill Beckwith, EPA, Region 1, Boston, MA
Water Quality Standards Coordinator

November 26, 2003

FROM: Vern Lang, Assistant Supervisor, NEFO

SUBJECT: Maine Surface Water Quality Standards

In response to your October 29, 2003 Memorandum, I have reviewed the legislative chapters as requested and offer the following comments based on my interpretation of the language used therein. Accordingly, I have attempted to qualify my comments because of the potential for different interpretations.

LD 1059 - Distinction between storage reservoirs and natural lakes

This provision could be interpreted as putting a footnote into the water quality standards to mandate a specific reference condition for Class C aquatic life criteria. Under normal circumstances, the reference site and community is free from known pollution sources or other activities that could bring about a change in the natural state of the community (Chapter 579). However, the mandated reference is a storage reservoir of similar drawdown magnitude from which the structure and function of the resident biological community is to be used for comparison against the subject impoundment. This would result in a specific interpretation of the Class C criteria and definition of resident biological community which effectively changes the standards much like the language contained in LD 1137 for dissolved oxygen. I have my doubts about this footnote providing for the protection and propagation of aquatic life. I would recommend that EPA ask the state to demonstrate that this provision is protective of aquatic life and Class C criteria.

LD 443 - Listing agriculture as a designated use

Probably nothing wrong here for Class B waters, but what would be the purpose of adding agriculture as a designated use in Class AA waters? These waters are supposed to be free-flowing and natural. Would this have adverse consequences for water withdrawals and other flow issues, the reference condition for resident biological community or other definitions? Perhaps an Attorney General interpretation would be useful to clarify the scope of this change.

LD 1547 - Public hearings

This change would appear to be contrary to 33 USC 1313 (c)(1) which requires a review once every three years.

LD 1137 - Dissolved oxygen in riverine impoundments

These provisions for riverine impoundments seem to create exceptions from the dissolved oxygen, aquatic life and habitat criteria that apply to other Class A, B, and C waters.

Subpart A. requires the DO point of measurement to be at least 0.5 meters above the bottom of the impoundment.

Subpart B. specifies the point of DO measurement in reservoirs under stratified conditions as 1) at the point of stratification or 2) at a point specified in a UAA.

Subpart C. specifies that DO may not be measured in a topographically isolated area such as a deep hole or bottom sill.

I recall having a discussion with DEP staff some time ago with regard to the matters in Subparts A. and C. At that time, these were discretionary judgements to be rendered by the staff in specific circumstances. Now, however, these are mandatory points of measurement and this broad sweep of the pen could have substantial effect, particularly Subpart B.1.

The Subpart B.1. footnote to the standards seems to create a subclass and/or subset of waters without defined criteria within Class A, B, and C waters with respect to habitat, DO and the resident biological community. This change would prohibit D.O. measurement in the hypolimnion where D.O. might be below the standard for the classification. For example, if D.O. is less than 3 mg/l for extended periods, how could the habitat or aquatic life criteria be met? It would be useful to know the extent and implications of this legislative change, e.g., how many miles/acres would be in each subclass/subset, and what are the spatial and temporal aspects of each subclass/subset on an annual basis with respect to habitat, dissolved oxygen, and aquatic life, including the resident biological community. As with LD 1059 above, it is not clear that these provisions would provide for the protection and propagation of aquatic life in these subclasses/subsets of waters, nor achieve the standards for the classification. With respect to Subpart B in particular, I would recommend that EPA ask the state to explain what they interpret Subpart B to mean and to demonstrate that these provisions provide for the protection and propagation of aquatic life and fully meet aquatic life and other criteria for the referenced classes.

LD 1529 - Reclassification

I note that the upgrade for the section of the Kennebec River from the Curran Bridge in Augusta to tidal waters at Abagadasset Point contains a footnote to maintain certain discharge limits for chlorine

and bacteria at current levels until 2009. It would appear that Class B conditions may not be fully attained until 2009. Nonetheless, it appears that the reclassification is moving in the right direction.

LD 1308 - Mercury

The preamble to this chapter and the actual provisions in the chapter do not seem to be in perfect alignment. For example, the second paragraph of the preamble says that existing state law prohibits the discharge of mercury that would increase the natural concentration of mercury in waters, whereas Section 1 allows for interim limits that are presumably less stringent than the ambient criteria in Section 3. In addition, Section 1.D. provides for new and increased discharges of mercury.

The EPA published criteria for mercury and other pollutants under Section 304(a) of the CWA as required at various times during the 1990s. While I do not have all of the exact dates when the present mercury criteria were first published, the list of water quality for aquatic life criteria was republished in the Federal Register on December 10, 1998 and those criteria for mercury remain in effect today. Maine, like other states, has had at least five years to adopt and implement these criteria as enforceable water quality criteria in their water quality standards. However, Section 1 would provide for interim limits for an indefinite period of time and this footnote to the standards would seem to amount to an exemption from the criteria in Section 3.

In addition, Section 1.D. would provide for an interim limit for a new or expanded discharge. Again, no time limit is attached to this provision. This provision requires an antidegradation review and as such uses the significant lowering language common to A-D reviews. I interpret this to mean that if the new or expanded discharge uses less than 20% of the remaining assimilative (actually dilution) capacity of the receiving water, it is considered insignificant. The socio-economic test would then follow for insignificant discharges. Significant discharges would apparently not be allowed. It would be useful to know how extensive the deliberative process would be to determine significance. For instance, is the break point for significance 10%, 20%, 30% of the remaining assimilative capacity? Finally, it is not clear why the legislature would allow for an interim limit as opposed to requiring any new or expanded discharge to meet the criteria in Section 3 which were promulgated by EPA over 5 years ago.

Section 1.E. provides for a grandfather clause which presumably expires in January 2004.

Section 3 establishes ambient criteria for mercury. It would be useful to verify that the criteria listed represent total mercury which when subjected to the conversion factor for dissolved mercury (0.85) are equal to the criteria promulgated by EPA. Secondly, it would be useful to verify the date that these criteria become effective, given the language contained in Section 1. LD 1308 seems to adopt the 304(a) criteria for mercury, but it is not clear that they have any real effect given the open-ended interim standards. Third, it would be useful to determine when these criteria would be implemented into NPDES permits, et al., given the interim criteria in Section 1.

On a positive note, Section 3(C) authorizes the DEP to establish a site-specific bioaccumulation factor for mercury. Sections 3(D) and (E) require the DEP to develop a statewide bioaccumulation factor and statewide ambient water quality criteria to protect wildlife, respectively.

Let me know if I have misinterpreted the legislative chapters and I would be happy to reconsider my views as expressed herein.

Questions may be directed to me at 603-223-2541 or email vernon_lang@fws.gov.